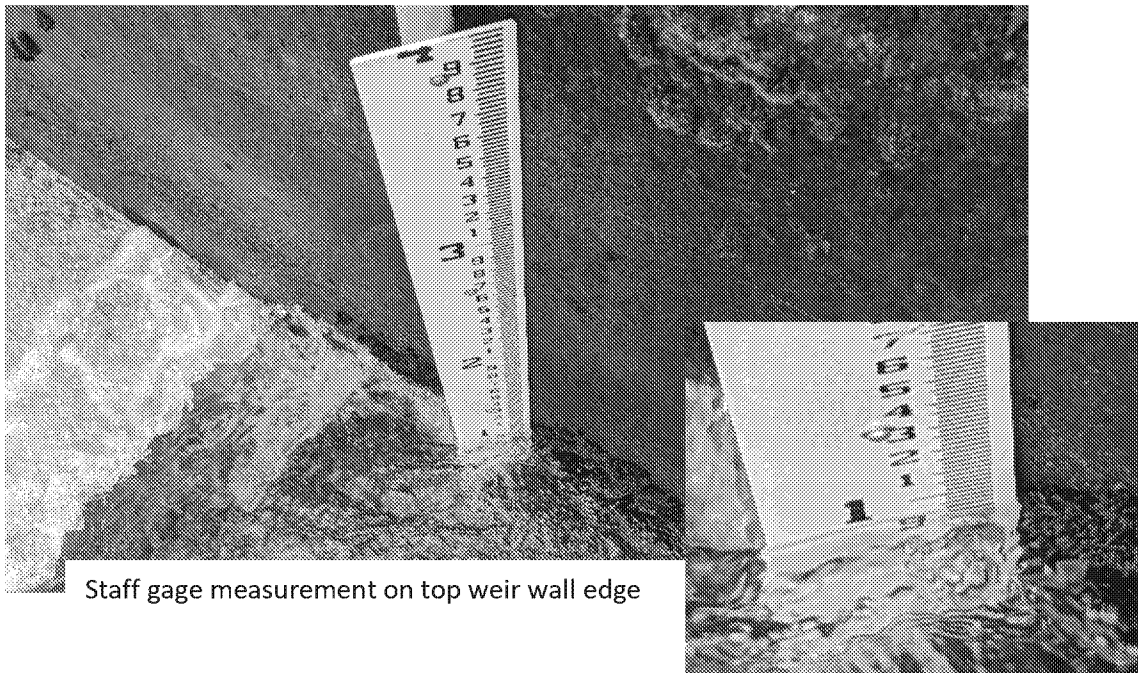


**Re: HPA APP ID #14829**

**Fish Ladder Monitoring Report for December 14<sup>th</sup> through December 20<sup>th</sup>, 2020**

For the week of December 14<sup>th</sup>, the ladder was observed on December 17<sup>th</sup> from 14:15 – 15:15. The river conditions and fish ladder were monitored from the ladder side (east bank) of the river. Weather conditions were mostly cloudy with a light mist at the time of observation. River discharge on the 17<sup>th</sup> was approximately 580 cfs during the time of observation, with a maximum of 630 and minimum of 565 cfs for the day. At the ladder, a staff gage placed at the edge of a weir wall measured a water column height of 0.9 ft during observation. The weekly high total river discharge peaked at 2200 cfs, and the weekly low reached 338 cfs. The drop height from the last ladder cell to the raceway appears to be at the 14" or greater mark; an adjustment of the cell drop height may be necessary soon, and WDFW has been informed. No height change has occurred since last observation.

No fish were observed this week at the ladder or the surrounding spillway area. While no obstructive woody debris accumulated within 100 m upstream of the ladder, a deciduous tree was noted last week as leaning over the river approximately 15 meters upriver of the fish ladder entrance and may pose an obstruction hazard in the near future. This tree has been leaning over the river since at least early October, according to photo records. The bedload present in the ladder is not adversely affecting flow or ladder function. Bedload accumulation will be removed as soon as permitting allows.



Staff gage measurement on top weir wall edge